

TECHNICAL MANUAL ^{EN}



Dolphin
all in one **premium**

Power unit
DC & AC

12V25A
REYA Code : 399121

12V40A
REYA Code : 399123



equipment designed by [mdp electronics](#)

NOT_AIO.PREMIUM-01

NOT_AIO.PREMIUM-01



TO PREVENT ANY RISK OF ELECTRIC SHOCK OR FIRE, READ THIS MANUAL CAREFULLY BEFORE INSTALLING THE EQUIPMENT.

In the event of a problem, or something you do not understand, contact **REYA**.

This unit is not designed to be used by children, or persons with a physical, sensorial or mental disability, or with insufficient experience or knowledge, unless a safety supervisor is present or they have received preliminary training in the use of the unit.

Children should be supervised to avoid their playing with the unit.

This unit contains components that may cause electric arcs or sparks, when connecting cables for example.

To prevent any risk of fire or explosion, do not install this unit close to inflammable materials, liquids or gases.



Installation precautions

In order to prevent any risk of overheating or permanent damage to the unit, the recommendations below should be strictly followed.

- ▶ This unit should not be installed close to a heat source.
- ▶ It should not be installed in a sealed or poorly ventilated volume.
- ▶ The cooling vents must not be obstructed. Leave an unobstructed space of at least 10cm around the unit, to allow proper convection.
- ▶ The unit must not be exposed to run-off water, water spray or any type of dust.

▶ It is strongly recommended that the unit be mounted vertically, with the cable exit at the bottom.

▶ The mains power socket and the battery connector must remain accessible and workable when the unit is installed.

▶ The case must not be structurally modified, for example by drilling additional holes.

▶ This unit is not a toy, and should therefore obviously not be left in the hands of a child.



Connection precautions

In order to prevent any risk of electric shock or permanent damage to the unit, the recommendations below should be strictly followed.

The unit is designed to be connected to single phase systems **230V or 115V, 50Hz or 60Hz**.

The equipment supplied by this unit must be compliant with the applicable regulations. The power line must feature a cut-off device with differential protection to protect individuals against electric shock.

Refer to the unit electrical consumption data for the selection and rating of the protection circuit-breaker.

For safety reasons, the unit PE terminal must be connected to the main earth of the installation (green / yellow wire of mains power cable). Refer to the wiring diagram for more information.

In order to prevent overheating, ensure that cables are of the correct cross-section and that the connections are tight.

NOT_AIO.PREMIUM-01

NOT_AIO.PREMIUM-01

Mains power cable length must not exceed 3 metres, and 1.5 metres for the battery cables.

Ensure that the AC and DC cables are properly connected, using the connector locks supplied with each unit.

The protective covers supplied must be fitted onto the AC cables, firstly for protection against electric shock and secondly the cables are mechanically supported by the connector locks.



Precautions before operation

In order to prevent any risk of electric shock when switching on or during operation, the following directives should be strictly applied.

Obviously, the unit should not be disassembled and the case (which is fire-resistant) must be properly assembled.

This unit is compliant with applicable regulations concerning emitted interference and immunity from external interference (see EMC section in the Technical Specifications).

During operation, be particularly careful to avoid exposing the unit to conducted or radiated interference exceeding the legal levels (e.g. unit too close to a power radio-electrical transmitter). Such exposure can cause serious malfunctions.

Furthermore, this unit emits conducted and radiated interference at levels within the applicable regulatory limits.

Ensure that other equipment used in the vicinity is electro-magnetically compatible with this unit, otherwise malfunctions may occur.

Unit serial No.

The unit serial number is on the grey label, bonded to one of the case side panels.

The number is vertical and starts with a numerical value indicating the year of manufacture (e.g. 14 for 2014), followed by a letter indicating the month of manufacture (e.g.

C for the month of March) and a 4 or 5-digit representing the unit number within the series.

The term Rev XX indicates the unit change or evolution status.

Important: Note concerning the charging rate.

Using a charging cycle that is unsuitable for the battery technology may seriously damage the battery.

This is particularly the case when using a charging voltage significantly greater than that recommended by the battery manufacturer.

A considerable risk of battery overheating, with a release of noxious gases that can damage health.

Refer to the manufacturer's recommendations to determine the correct charging cycle.



Maintenance precautions.

► In order to prevent any risk of electric shock during outdoor maintenance work, the following recommendations should be strictly applied.




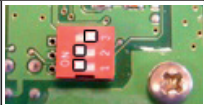
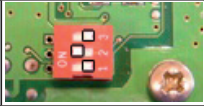
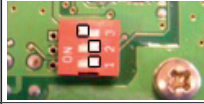


► **Maintenance operations should only be carried out by a qualified technician.**

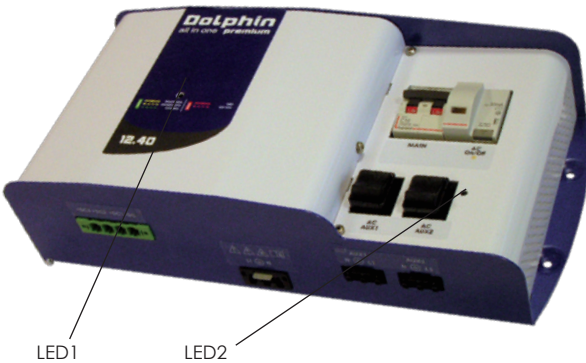
NOT_AIO.PREMIUM-01

- ▶ In the event of damage to the AC or DC cables, these latter should only be replaced by authorised personnel, in order to avoid danger.
- ▶ Mains power and batteries must be disconnected (cable, connectors and/or main switches).
- ▶ Wait 5 min. before starting work on the case to allow the high voltage capacitors to discharge.
- ▶ Battery fuses should only be replaced by fuses of identical specification and ratings.

	12V25A	12V40A
Code	399121	399123
Mains power characteristics		
Voltage	230V +/- 10%	
Frequency	50 - 60Hz +/- 10%	
Charger consumption	2,5A	4,0A
Auxiliaries consumption	Max. 10A total for both outputs	
Display	LED on front panel (yellow)	
Differential circuit breaker	16A 30mA	
Charger fuse	T6,3A	T10A
Display	On/Off LED on front panel (yellow)	
Battery charger characteristics		
Voltage	85V - 265V	
Frequency	50 - 60Hz +/- 10%	
Number of outputs	3 isolated outputs	
Charging rates	Total 8	
Charge selector	Toggle switch inside case	
Voltage tolerance	+/- 2%	
Ripple	< 1%	
Max. current	25A +/- 5%	40A +/- 5%
-DC fuse	F30A	2 x F30A
Protection	By fuse, in the event of internal overheating, abnormal output voltage, output short-circuit or reverse polarity	
Display	3-colour LED on front panel Yellow: Boost mode Green: Float mode Red: Fault	

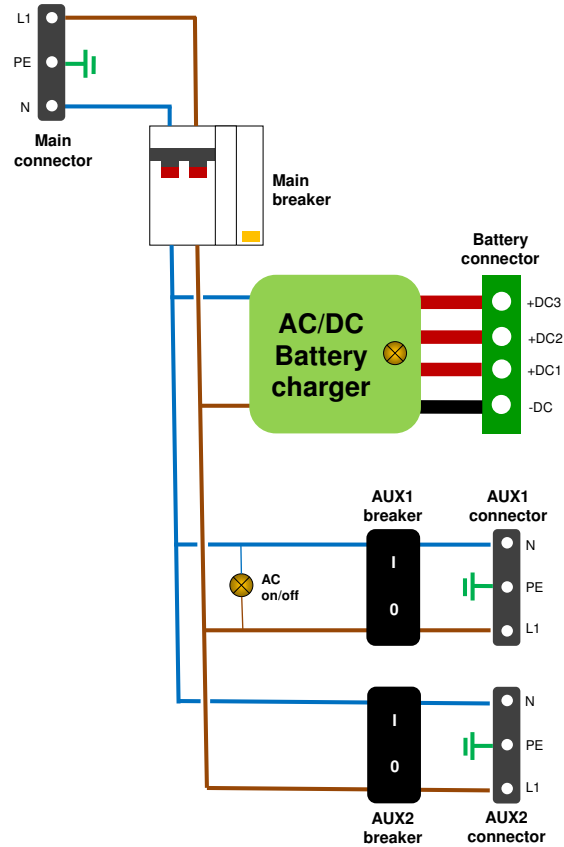
NOT_AIO.PREMIUM-01

Free electrolyte <i>scanning charge</i>		Boost = 14,4V Float = 13,2V
Sealed lead-acid <i>scanning charge</i>		Boost = 14,2V Float = 13,6V
Lead-calcium <i>scanning charge</i>		Boost = 14,8V Float = 13,8V
Delphi <i>scanning charge</i>		Boost = 15,4V Float = 13,8V
Spiral cell agm		Boost.1 = 14,8V Boost.2 = 15,5V Float = 13,8V
Winterizing		Boost = 14,4V Weekly automatic Float = 13,2V
Gel <i>scanning charge</i>		Boost = 14,4V Float = 13,8V
Power supply		Float = 13,6V
AC auxiliary output characteristics		
Number of outputs	2	
Voltage	Same as mains power voltage	
Frequency	Same as mains power frequency	
Max. current	10A	
Protection	10A magnetic thermal circuit breaker	
General		
Operating T°	-10°C to +55°C	
Storage T°	-20°C to +70°C	
Relative humidity	Max. 90% (without condensation)	
Convection	Forced (thermostat-controlled fan)	
Standards	EN61000-6-1, EN61000-6-3, EN60335	
Case	Wall-mounted in painted aluminium alloy	
Mounting	By 3 screws (diameter 4 mm)	
Dimensions (mm)	395x188x103mm	
Weight	< 3 kg	
Mains power connector	Type WINSTA (WAGO), 2 x 2,5 mm²	
AC output connector	Type WINSTA (WAGO), 2 x 2,5 mm²	
Battery connector	Type PC6/4 (Phoenix Contact), 4x16 mm²	

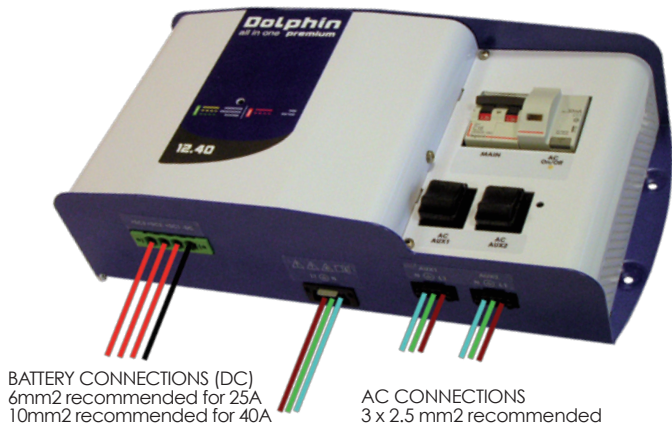


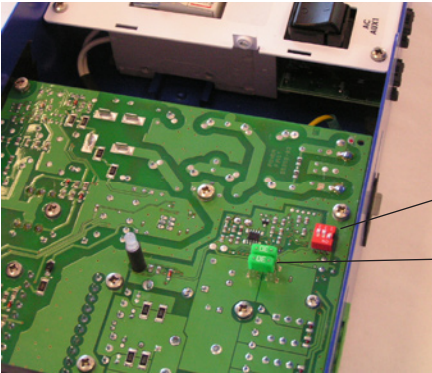
MODE	LED.1	STATUS
Charging	Yellow steady	Batteries are being charged. Charging phase time varies up to 6 hours, depending on the battery's initial charge level.
Balancing	Yellow flashing	End of battery charging phase. Balancing phase time varies between 30 minutes and 4 hours, depending on the battery's initial charge status.
Floating	Green flashing	Batteries are charged.
Internal temperature fault «Temp»	Red flashing	Batteries are charged. ▶ Check climatic conditions, internal fan operating properly, charger space volume.
Abnormal output voltage fault «Volt out»	Red steady	Charger is in standby for a period of 30 seconds. Restarting is automatic when the fault is cleared. ▶ The electronics board is probably permanently defective.
Battery fuse fault «Bat fuse»	Rouge fixe	Battery fuse is defective. ▶ Check connections, polarity and battery charge status.
	LED.2	
AC On/Off	Yellow steady	Electricity cabinet power on

Circuit diagram



Connections

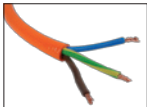




Charge selector

Battery fuses

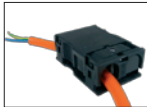
Assembly of Winsta AC connectors



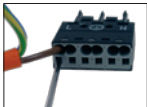
- ◀ **STEP 1**
Strip the cable over around 3 cm
Strip the 3 wires over around 8 mm
Tin the bare copper ends



- ◀ **STEP 2**
Remove the cap from the case, using a cutter



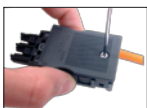
- ◀ **STEP 3**
Thread the cable into the case



- ◀ **STEP 4**
Insert a flat screwdriver into the square hole, to open the contact, and insert the wire. Repeat this operation on the 3 wires, as shown in the wiring diagram

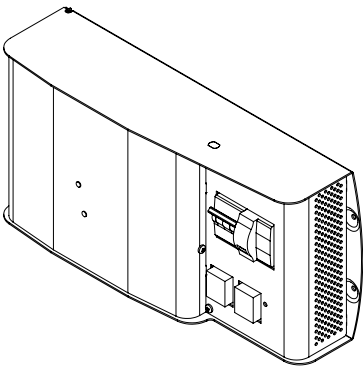
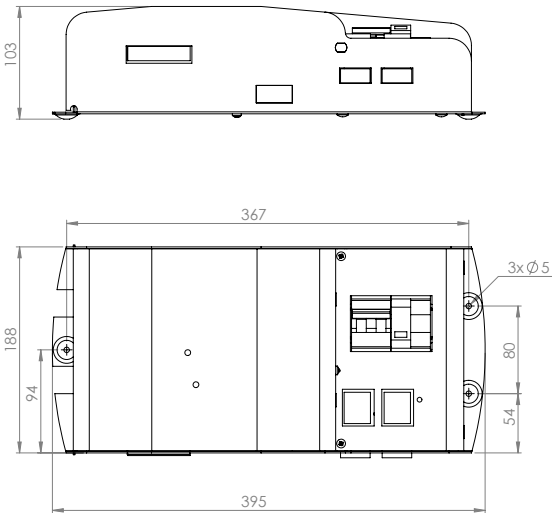


- ◀ **STEP 5**
Insert the connector into the case and check that the cable penetrates around 1 cm into the case.



- ◀ **STEP 6**
Press on the sides of the case and fit the assembly screw

Installation dimensions



IN ORDER TO ENSURE THAT THE UNIT IS PROPERLY USED, CAREFULLY READ THE LIST OF INCIDENTS OR POTENTIAL DEFECTS NOT COVERED BY THE WARRANTY

► Dropping the unpackaged unit can permanently distort the case, and/or cause the failure of the internal cooling fan or certain electronic components.

► Modifications to the case (particularly drilling additional holes) can leave swarf or metal filings on the electronics board, causing malfunctions or permanent damage to the unit.

► Work or modifications on the electronics board can result in operating modes for which the unit was not designed, causing permanent damage to the unit.

► Connecting the unit to a power supply outside tolerances (generally an excessive mains power voltage) can cause permanent damage to the unit.

► Accidental mains power overvoltage or a lightning strike generally causes permanent damage to the unit.

► Replacing battery fuses by fuses with different ratings can cause permanent damage to the unit.

► Obvious connection errors causing permanent damage to the unit.

► Water spray or run-off water inside the unit can cause permanent electronic malfunctions.

Important: Note concerning the charging rate.

Using a charging cycle that is unsuitable for the battery technology may seriously damage the battery.

This is particularly the case when using a charging voltage significantly greater than that recommended by the battery manufacturer.

A considerable risk of battery overheating, with a release of noxious gases that can damage health.

Refer to the manufacturer's recommendations to determine the correct charging cycle.

Precautions for scrapping

This unit contains electronic components and materials that must be recycled at the end of the unit's life cycle, for environmental reasons.

At the end of their life cycle, all units should be either returned to the local distributor or entrusted to a specialist electronic equipment recycling company.

Guarantee policy

Our complete two-year product warranty consists of the following provisions:

► Dolphin guarantees the operation of its products under normal use (when used within the relevant specifications) for a period of two years after purchase from the DOLPHIN dealer with a maximum period of three years after date of production (see indication on product label)

► This warranty covers the costs of repairs and/or replacement of the defective parts. Any costs related to (dis)assembly, shipping, and/or travel and lodging expenses for technicians are not included.

► These warranties are void in situations in which damage was caused due to use of Dolphin products in circumstances for which they were not intended, incorrect installation or maintenance, replacement or modifications carried out by parties other than Dolphin certified support points or damage caused by (sea) water, including (sea) water entering an engine (however caused).

Returns for repairs or replacement under our warranty

We advise you to have all returns coordinated by your nearest local DOLPHIN distributor, dealer or closest local representative office, unless you have an express agreement with the headquarters in France stating otherwise. All returns are subject to the following conditions:

► An RMA (Return Materials Authorization) registration number is necessary for all returns. This number has to be specified on all packages and documentation.

► Postage for all returns sent to France must be paid. No freight, transaction or import duties can be charged to Dolphin.

► Returns have to be provided with the right documentation, including telephone numbers, contacts, return addresses and a clear description of the reason for return.

If there is no local distributor, dealer or DOLPHIN office in your area, then please contact DOLPHIN France.

CE COMPLIANCE

This unit meets the requirements of the applicable European standards and bears a CE marking. Certificate of conformity available on request.

For further information, contact:

REYA SAS

2599 Route de la Fènerie

06580 Pégomas - France

Tel : (33) 0 493 90 47 00

Fax : (33) 0 493 90 24 40

e-mail : contact@dolphin-charger.com

www.dolphin-charger.com